

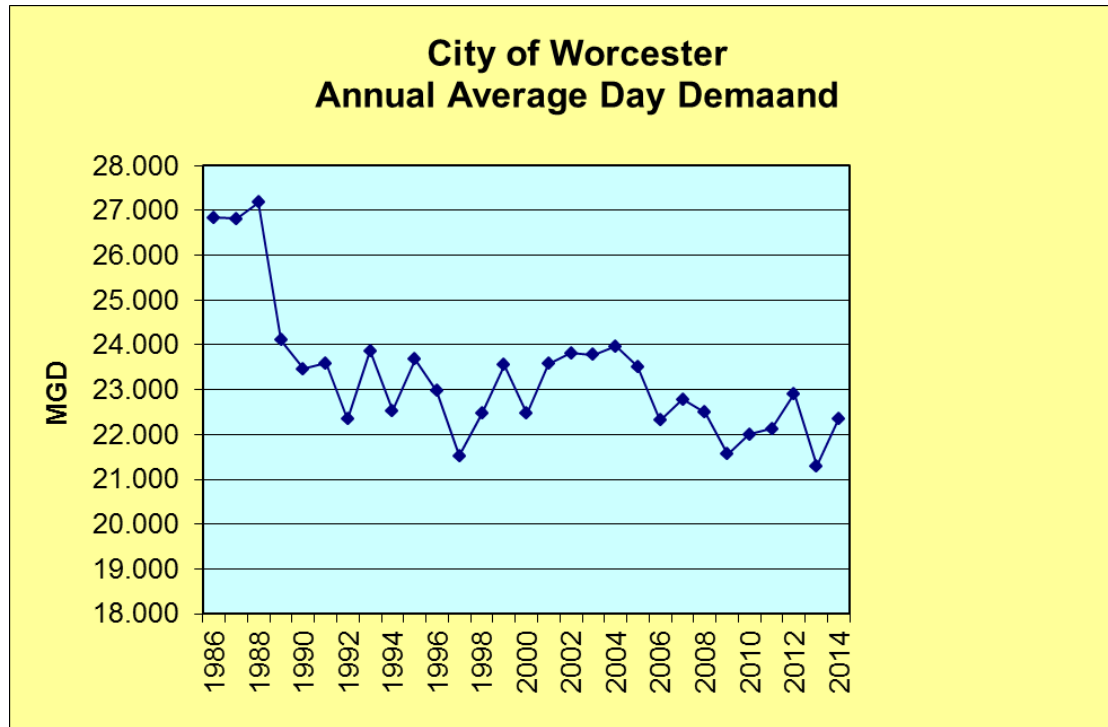


**CITY OF WORCESTER
DEPARTMENT OF PUBLIC WORKS & PARKS
WATER OPERATIONS**

Background on the Worcester Water System

- * Worcester-
 - * Became a City in 1848
 - * Industrial/Manufacturing Center
 - * Population peaked in 1950s then declined until 1980s but has been on upward trend since
 - * Population 2010 = 181,045
 - * Water system development followed needs of a growing City
 - * Consumption peaked in 1988 followed by decline and stable use despite growing population and additional regional customers

Water Consumption Trends



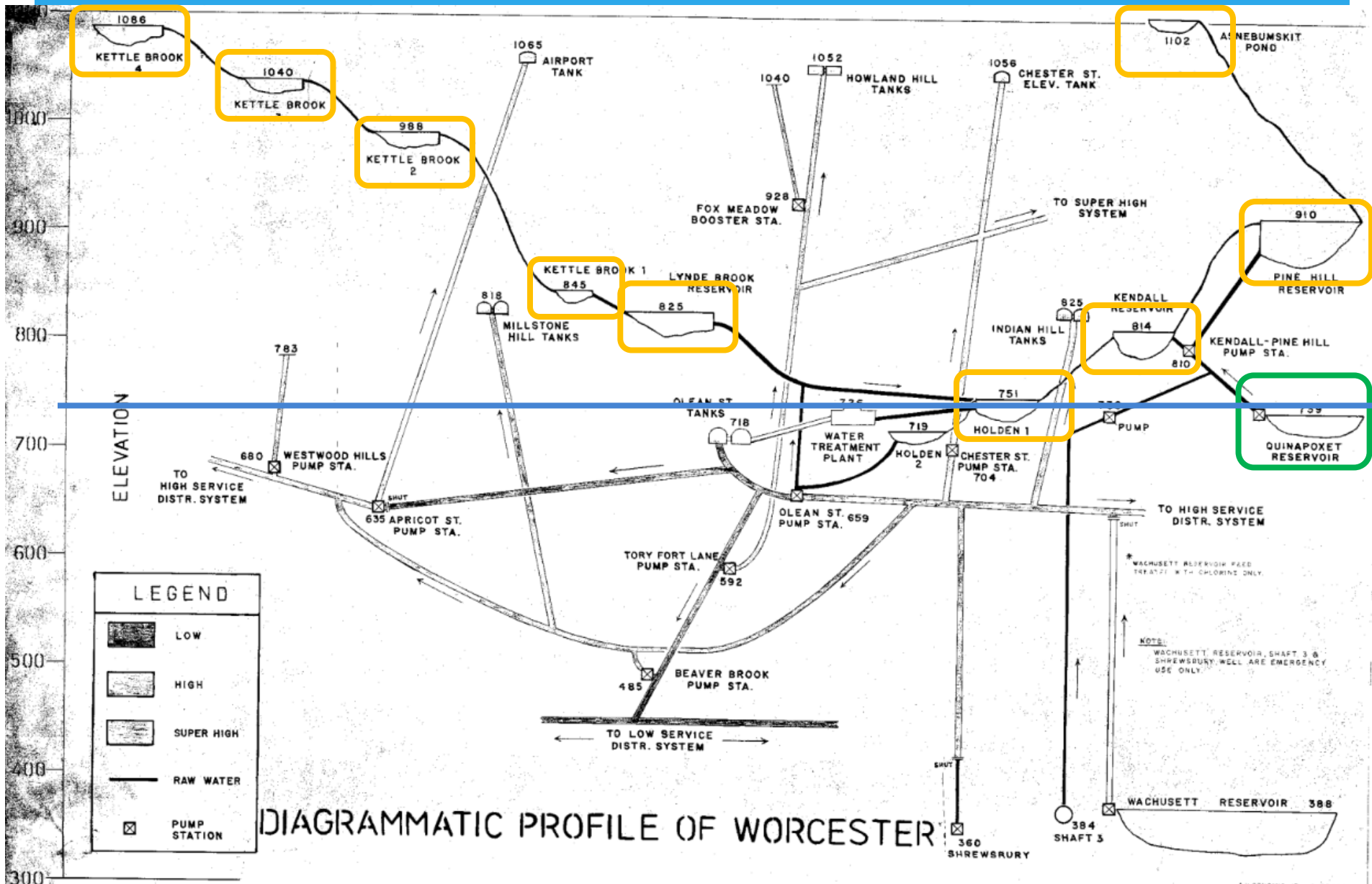
Supply

- * 10 Surface Water Reservoirs Combined at a Single Entry Point
- * 7.4 Billion Gallons Total Storage
- * 40 Square Mile Watershed
- * Constructed 1860's-1950's
- * Used Exclusively for Water Supply

WORCESTER SURFACE WATER SUPPLIES

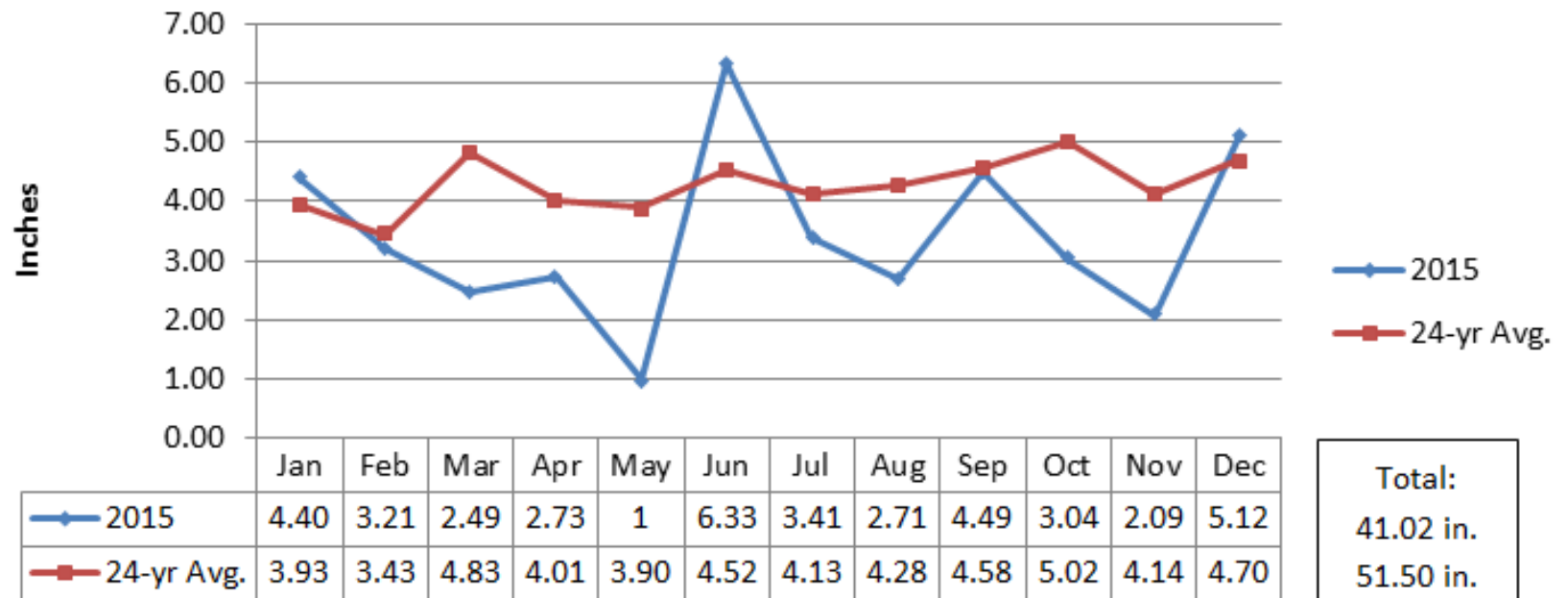


Reservoirs Work With Gravity to the Treatment Plant



Rainfall Trends

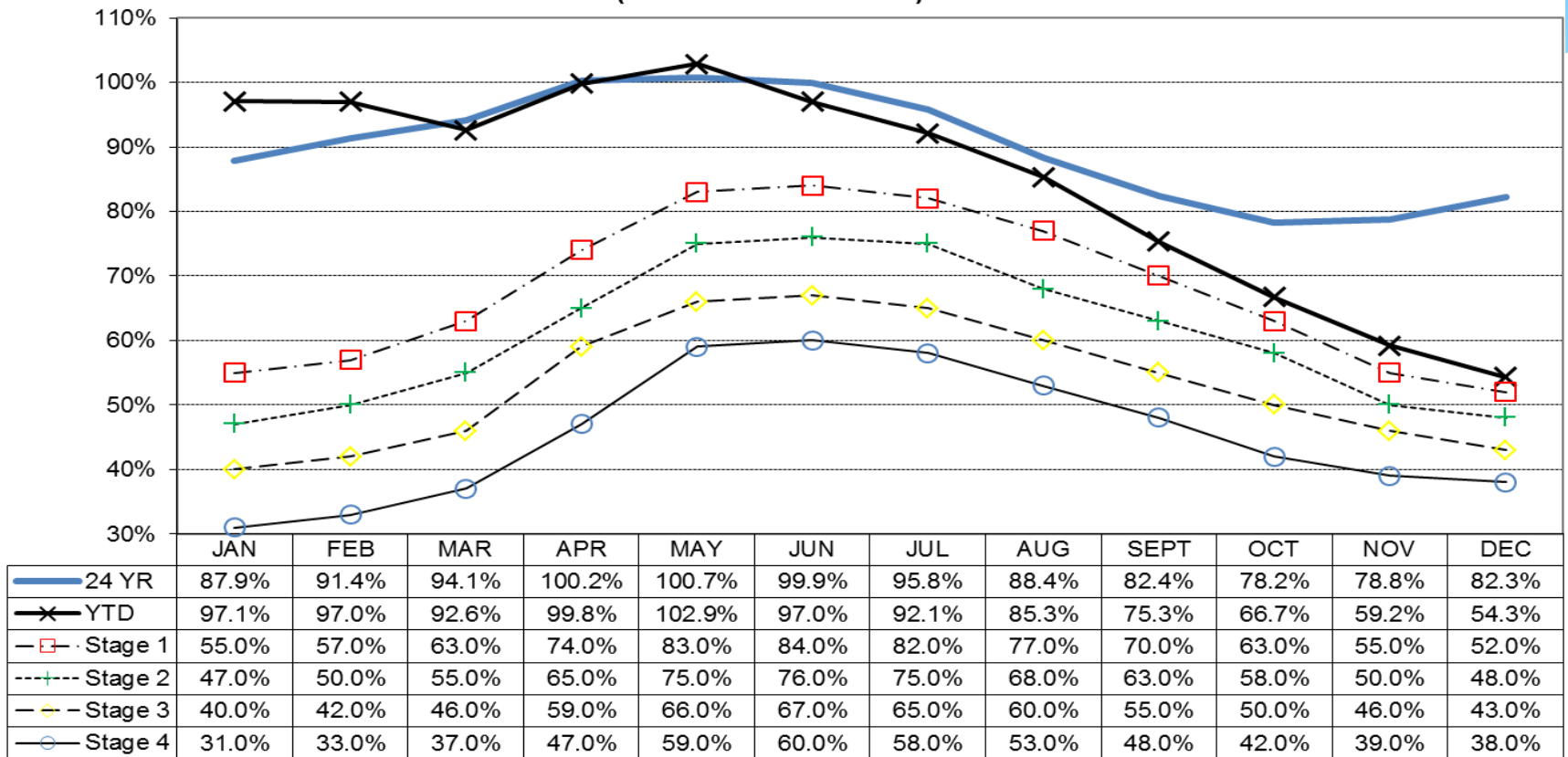
Rainfall in Inches: 2015 vs 24-Year Avg



Storage Trends

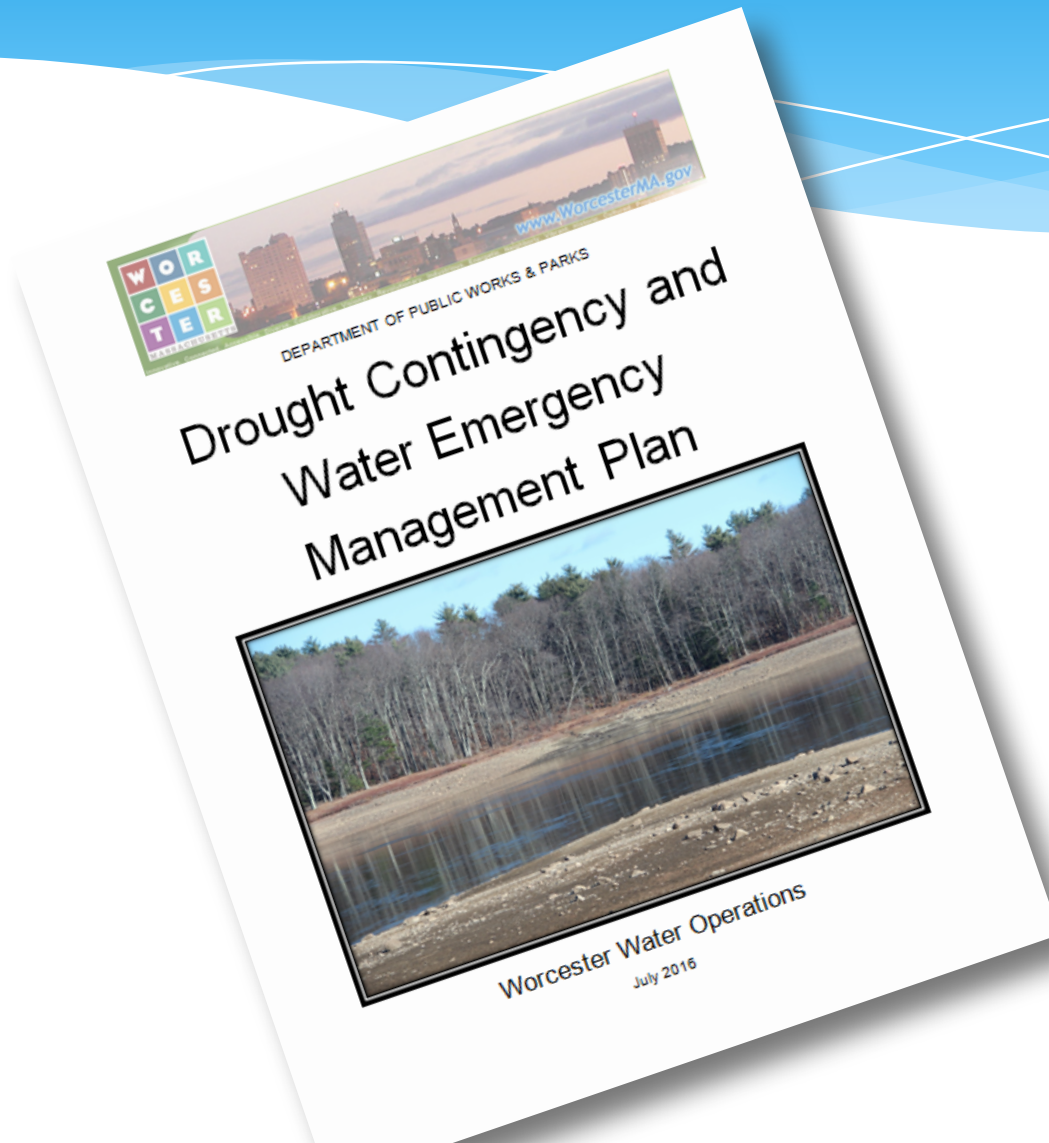
Percent Of Total
Reservoir Capacity

TOTAL RESERVOIR CAPACITY COMPARED WITH DROUGHT CONTINGENCY PLAN (Calendar Year - 2015)



All Figures Are For The First Of Each Month

The Plan



Basic Timeline

Drought Alert

- * Stage 1: January 11, 2016
 - * Reservoirs at 55% compared to 88%



- * Voluntary restrictions. Lifted in April.

Drought Alert



- * Stage 1 again: June 20, 2016
 - * Reservoirs at 85% compared to 100%



Drought Warning

- * Stage 2: July 18, 2016
 - * Reservoirs at 72% compared to 92%
 - * Mandatory Restrictions



Sun	Mon	Tues	Wed	Thur	Fri	Sat
EVEN		ODD	EVEN	ODD	EVEN	ODD
						

Drought Emergency

- * Stage 3: September 8, 2016
 - * Reservoirs at 55% compared to 82%
 - * Mandatory ban on all outdoor water use



Update

- * Pumping from Shaft 3 started Sept. 13, 2016
- * Consumption is dropping to near winter rates

Consumption (million gallons per day)	
Average consumption for August 2016	25.566
Average consumption to September 2016	23.404
Average consumption week of September 3 rd – week 1	25.282
Average consumption week of September 10 th – week 2	24.326
Average consumption week of September 17 th - week 3	23.664
Average consumption week of September 24 th - week 4	22.891
Average consumption week of October 1 st - week 5	21.946